Supplementary Material for "Differences in subthreshold resonance of hippocampal pyramidal cells and interneurons: the role of h-current and passive membrane characteristics"

Rita Zemankovics¹, Szabolcs Káli^{1,2}, Ole Paulsen^{3,4}, Tamás F. Freund^{1,5} and Norbert Hájos¹

- Péter Pázmány Catholic University - Semmelweis University, Budapest, Hungary

Address for correspondence: Norbert Hájos, Department of Cellular and Network Neurobiology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Szigony street 43, Budapest, 1083 Hungary, phone: 36-1-2109400, fax: 36-1-2109412, e-mail: hajos@koki.hu

Supplementary figure:



Figure S1. Sinusoidal fit to the original data points from the voltage response of a cell for a low frequency (0.5 Hz) sinusoidal current input, showing that 3-second-long current injections allowed us to estimate both the amplitude ant the phase of the voltage response at a high level of precision even for low frequencies. The quality of the fit was very good, which indicated that several possible types of error had been avoided: first, that the signal-to-noise ratio for this current amplitude was sufficiently good; second, that there was no substantial drift (long transient) during the part of the response used for the impedance analysis; and third, that stimulation intensity was small enough such that the cell's response remained within the linear range.

¹ Department of Cellular and Network Neurobiology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary

² Infobionic and Neurobiological Plasticity Research Group, Hungarian Academy of Sciences

³ Department of Physiology, Anatomy and Genetics, University of Oxford, Oxford, UK

⁴ Department of Physiology, Development and Neuroscience, University of Cambridge, Cambridge, UK

⁵ Faculty of Information Technology, Péter Pázmány Catholic University, Budapest, Hungary